Oral and Oropharyngeal Cancer

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KEYWORDS

• Squamous cell carcinoma • Oropharynx • Oral cavity • Biopsy • Tobacco • Alcohol • HPV • Areca nut

KEY POINTS

- Major risk factors for oral and oropharyngeal cancer (OPC) are exposure to tobacco, alcohol, areca nut, and human papillomavirus 16.
- OPCs usually arise from a preexisting potentially malignant disorder such as leukoplakia, erythroplakia, oral submucous fibrosis, actinic cheilosis, and oral lichen planus.
- Common signs and symptoms include the presence of a persistent mass, nodule, or indurated ulcer, as well as pain, dysphagia, otitis, weight loss, fixation, trismus, and paresthesia or anesthesia.
- Evidence to support oral cancer screening is sparse, but clinicians are encouraged to perform an oral soft tissue examination.
- Persistent oral lesions should be referred for further assessment or undergo biopsy.
- A biopsy is required to establish the diagnosis of OPC and the value of adjunctive devices and tests purported to increase diagnostic yield and accuracy remains undetermined.
- Potential morbidities associated with therapeutic interventions include disfigurement, trismus, speech impairment, dysphagia, pain, infection, mucositis, salivary dysfunction, and bone necrosis.

INTRODUCTION AND EPIDEMIOLOGY

Cancer affecting the oral cavity[1] and oropharyngeal[2] space is a complex and often relentless malignancy prone to local invasion and dissemination. For convenience, "oral and oropharyngeal cancer" (OPC) is used in this article as an inclusive term to

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refer to cancers of both the oral cavity and oropharyngeal space (Table 1). Approximately 89% of OPCs are of the squamous cell type.[3] Other cancers potentially presenting in this area include salivary gland tumors, lymphomas, and sarcomas. This article focuses on squamous cell–derived OPC. Therapeutic interventions to treat OPC are complex and often associated with significant debilitating side effects that often negatively affect the patient's quality of life. The cost of treating OPC may be among the highest of all cancers in the United States.[4]

As with most cancers, diagnosis at an early stage is associated with the best opportunity for cure. However, only 31% OPCs are diagnosed at a localized stage; in contrast, 40% of colorectal cancers are diagnosed at a localized stage.[5] Some clinicians express concern that practitioners fail to recognize early disease by not accomplishing a thorough soft tissue examination on a routine basis.[6] However, patient apathy may contribute to diagnostic delay, because more than 35% of patients acknowledge not seeing an oral health care provider on a routine basis and wait until symptoms develop before seeking care.[7,8]

Most OPCs are thought to arise from a preexisting potentially malignant disorder (PMD). Common PMDs are summarized in Table 2 and include leukoplakia (Figs. 1 and 2), erythroplakia (Figs. 3 and 4), oral lichen planus (discussed elsewhere in this issue), oral submucous fibrosis, actinic cheilosis (Fig. 5), and snuff patch (Fig. 6).[9–14] Leukoplakia and erythroplakia are descriptive clinical terms used to imply concern.

- The original 1978 definition of leukoplakia is, "A white patch or plaque that cannot be characterized clinically or pathologically as any other disease and is not associated with any physical or chemical causative agent except use of tobacco." In 2007, a workshop coordinated by the World Health Organization Collaborating Centre for Oral Cancer and Precancer amended the definition to, "White plaques

Table 1
Site definitions for OPC

Oral Cavity Space[a]	Oropharyngeal Space[b]
The oral cavity extends from the skin-vermilion junctions of the lips to the junction of the hard and soft palates above and to the line of circumvallate papillae below to include the following specific areas: • Lip • Anterior two-thirds of tongue • Buccal mucosa • Floor of mouth • Upper and lower gingiva • Retromolar trigone • Hard palate	The oropharynx is located between the soft palate superiorly and the hyoid bone inferiorly; it is continuous with the oral cavity anteriorly and communicates with the nasopharynx superiorly and the supraglottic larynx and hypopharynx inferiorly. The oropharynx is divided into the following sites: • Base of the tongue, which includes the pharyngoepiglottic folds and the glossoepiglottic folds • Tonsillar region, which includes the fossa and the anterior and posterior pillars • Soft palate and uvula • Posterior and lateral pharyngeal walls

[a] *Data from* National Cancer Institute. PDQ® Lip and Oral Cavity Cancer Treatment. Bethesda (MD): National Cancer Institute; 2012. Available at: http://cancer.gov/cancertopics/pdq/treatment/lip-and-oral-cavity/HealthProfessional. Accessed February 5, 2014.
[b] *Data from* National Cancer Institute. PDQ® Oropharyngeal Cancer Treatment. Bethesda (MD): National Cancer Institute; 2013. Available at: http://cancer.gov/cancertopics/pdq/treatment/oropharyngeal/HealthProfessional. Accessed February 5, 2014.